

IN THE CLAIMS

1. (Currently amended) A method for treating a container for food, comprising circulating a gas mixture comprising about 1 to about 50 mg/L chlorine dioxide gas and the balance being a carrier gas and having about 30% to about 100% relative humidity for a time in said container, then removing said gas mixture ~~the chlorine dioxide gas~~ from said container, and reclaiming the chlorine dioxide gas from said gas mixture.
2. (Original) The method of claim 1 wherein the chlorine dioxide gas is reclaimed by dissolving it in a solvent.
3. (Original) The method of claim 1 wherein the chlorine dioxide gas is produced outside said container.
4. (Original) The method of claim 1 wherein the chlorine dioxide gas is produced inside said container.
5. (Original) The method of claim 4 wherein the chlorine dioxide gas is produced inside said container by providing an aqueous chlorine dioxide solution in the storage container and bubbling a gas through the solution in the storage container.
6. (Currently amended) The method of claim 1 wherein said gas mixture ~~the chlorine dioxide gas~~ is removed by flushing said container with a filtered gas.
7. (Currently amended) The method of claim 6 wherein said gas mixture ~~the chlorine dioxide gas~~ removed from said container is directed to a chlorine dioxide gas-dissolving tank where the chlorine dioxide gas is dissolved in a solvent.

8. (Withdrawn) Apparatus for treating a container for food, comprising conduit means for circulating chlorine dioxide gas through said container for a time, means for removing the chlorine dioxide gas from said container, and means for reclaiming the chlorine dioxide gas removed from said container.

9. (Withdrawn) Apparatus of claim 8 including means for producing the chlorine dioxide gas outside said container.

10. (Withdrawn) Apparatus of claim 8 including means for producing the chlorine dioxide gas inside said container.

11. (Withdrawn) Apparatus of claim 10 wherein said means for producing comprises an aqueous chlorine dioxide solution in the storage container and bubbler to bubble a gas through the solution in said container.

12. (Withdrawn) Apparatus of claim 8 wherein said means for circulating comprises a conduit loop communicated to said container.

13. (Withdrawn) Apparatus of claim 8 wherein said means for removing said chlorine dioxide gas comprises a flushing gas introduced into said container.

14. (Withdrawn) Apparatus of claim 8 wherein said means for reclaiming said chlorine dioxide gas comprises a chlorine gas dissolving solvent in a tank.

15. (Withdrawn) Apparatus of claim 14 including means downstream of said tank for neutralizing any undissolved chlorine gas.

16. (New) The method of claim 1 wherein said carrier gas comprises air.

17. (New) The method of claim 1 wherein said carrier gas comprises nitrogen.

18. (New) The method of claim 1 wherein circulation of the gas mixture achieves a reduction in a target microorganism of 5 log or more.

19. (New) The method of claim 1 further including monitoring one or more of chlorine dioxide gas concentration, humidity, temperature and pressure in said container.

20. (New) The method of claim 19 further including controlling one or more of chlorine dioxide gas concentration, humidity, temperature, and pressure in said container.

21. (New) The method of claim 1 wherein the treated container is used for aseptic bulk tank storage of food.